CLAIMS

1. An alkaline pH, free solution capillary electrophoresis process for analyzing a sample comprising at least one protein constituent, said method comprising: introducing the sample into a capillary tube containing a buffer system, wherein said buffer system comprises at least one additive having an hydrophobic interaction with said at least one protein constituent and providing said at least one protein constituent with at least one negative charge thereby modifying the electrophoretic mobility.

2. The method of claim 1, which further comprises separating said at least one protein constituent by migrating and detecting said at least one protein constituent.

3. The method of claim 1, wherein the sample is a biological sample.

4. The method of claim 1, wherein the sample is blood, hemolyzed blood, plasma, urine or cerebrospinal fluid.

5. The method of claim 1, wherein said at least one protein constituent is blood protein.

6. The method of claim 1, wherein said at least one protein constituent is selected from albumin, α_1-globulin, α_2-globulin, β-globulin, β_1-globulin, β_2-globulin and γ-globulin.

7. The method of claim 1, wherein said at least one additive comprises an anionic polc with a pH of more than 9 and a hydrophobic portion.

8. The method of claim 1, wherein that said additive comprises a hydrophobic portion composed of at least one linear or non linear alkyl chain containing 4 to 22 carbon atoms, and/or at least a combination of 1 to 10 aromatic or non-aromatic cycles, and an anionic pole constituted by one or more groups selected from sulphonates, carboxylates, sulphates, phosphates and carbonates.

9. The method of claim 1, wherein said additive is selected from additive is selected from cholates, C_6 to C_{22} alkyl-mono-, di- or tri- sulphonates, tetradecenesulphonate, naphthalenesulphonates, C_6 to C_{22} alkylmono-, di- or tri-carboxylates, C_6 to C_{22} alkylcarboxysulphonates, naphthalenecarboxylates, C_4 to C_{14} alkylsulphates, C_4 to C_{14} alkylcarbonates, benzenesulphonates, and benzenecarboxylates.

10. The method of claim 1, wherein said additive is a C_6 to C_{10} alkylsulphonate.

11. The method of claim 1, wherein said additive is octanesulphonate.

12.2 The method of claim 1, wherein said additive has a concentration in said buffer system in the range of 0.1 mM to 500 mM.

13. The method of claim 12, wherein said additive in said buffer system does not exceed the critical micellar concentration of said additive in said buffer.

14. The method of claim 1, wherein said additive has a concentration in the range of 1 mM to 4 mM in said buffer system.

15. The method of claim 1, wherein said additive has a concentration of the order of 2.5 mM in the buffer system.

16. The method of claim 1, wherein said buffer system has a pH in the range 9 to 11.

17. The method of claim 1, wherein the capillary tube is fused silica.

18. The method of claim 1, wherein said buffer system further comprises at least one pH-modifying agent.

19. The method of claim 18, wherein the pH-modifying agent is selected from lithium hydroxide, sodium hydroxide, potassium hydroxide, rubidium hydroxide, caesium hydroxide, francium hydroxide, or a mono-, di-, tri- or tetra-alkyl ammonium hydroxide containing 1 to 8 carbon atoms in the alkyl portion.

20. A method for separating at least one protein constituent in a sample comprising a protein selected from albumin, α_1-globulin, α_2-globulin, β-globulin, β_1- globulin, β_2-globulin and γ-globulin, said method comprising passing said at least one protein constituent into a capillary containing a buffer system comprising at least one further additive having a hydrophobic interaction with albumin.

21. A method for electrophoretic separation, by alkaline pH, free solution capillary electrophoresis, of protein constituents in a liquid sample, said method comprising passing said at least one protein constituent into a capillary containing a buffer system further comprising at least one additive, wherein said additive is a compound comprising an anionic pole with a pH of more than 9 and a hydrophobic portion.

22. The method according to claim 1 or 20 or 21, wherein said buffer system further comprises sodium sulphate.

23. The method according to claim 1, wherein said additive is a zwitterionic biological buffer.

24. An electrolyte composition for capillary electrophoresis, which comprises in a support at least one buffer and an additive that has a hydrophobic interaction with albumin.

25. A composition for capillary electrophoresis, which comprises at least one buffer system and an additive comprising a hydrophobic portion composed of at least one linear or non linear alkyl chain containing 4 to 22 carbon atoms, and/or at least a combination or 1 to 10 cyclic aromatic groups or cyclic non-aromatic groups, and an anionic pole comprising at least one group selected from sulphonates, carboxylates, sulphates, phosphates and carbonates.

26. The composition for capillary electrophoresis of claim 25, wherein said additive is selected from cholates, C_6 to C_{22} alkyl-mono-, - or tri-sulphonates, tetradecenesulphonate, naphthalenesulphonates, C_6 to C_{22} alkylmono-, di- or tri-carboxylates, C_6 to C_{22} alkylcarboxysulphonates, naphthalenecarboxylates, C_4 to C_{14} alkylsulphates, C_4 to C_{14} alkylcarbonates, benzenesulphonates, and benzenecarboxylates.

27. The composition of claim 24, wherein that the additive is a C_6 to C_{10} alkylsulphonate.

28. The composition of claim 24, wherein said additive is octanesulphonate.

29. The composition of claim 25, wherein that the additive is a C_6 to C_{10} alkylsulphonate.

30. The composition of claim 25, wherein said additive is octanesulphonate.

31. The composition of claim 26, wherein that the additive is a C_6 to C_{10} alkylsulphonate.

32. The composition of claim 26, wherein said additive is octanesulphonate.

33. The composition of claim 25, wherein said additive is a zwitterionic biological buffer.